

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-23. (canceled)

24. (currently amended) A method of damping vibrations of a ~~member of a mobile platform~~ wing of an aircraft, ~~wherein the mobile platform includes the aircraft including a~~ control system, a movable structure operatively connected to the ~~member~~ wing, and an actuator operatively coupled to the structure to move the structure in response to a command signal generated by the control system, the method comprising:

mounting a vibration canceling circuit to the actuator;

~~providing using~~ a vibration sensor operatively connected to the canceling circuit
~~the member and adapted to sense a vibration of the member~~ wing and generate a signal representative of the vibration;

superimposing the vibration signal on the command signal to generate a resultant driver signal, the superimposing performed by the canceling circuit; and

operating the actuator with the resultant driver signal to cycle the structure to reduce the vibration of the ~~member~~ wing.

25. (previously presented) The method according to Claim 24, further comprising inverting the vibration signal before the superimposing the vibration signal on the command signal.

26. (currently amended) The method according to Claim 24, wherein the step of ~~providing~~ using a vibration sensor operatively connected to the member ~~canceling~~ circuit comprises coupling the vibration sensor to the actuator.

27. (previously presented) The method according to Claim 24, further comprising:
filtering the vibration signal from a position signal representative of a position of the actuator; and
inputting the filtered position signal to the control system.

28-33. (canceled)

34. (currently amended) A method of damping vibrations of a member of a mobile platform including a control system, a movable structure operatively connected to the member, and an actuator operatively coupled to the structure to move the structure in response to a command signal from the control system, the method comprising:

receiving the command signal from the control system;

generating a signal representative of vibration of the member, the generating performed using a vibration sensor operatively connected with the member;

combining the vibration signal with the received command signal to generate a resultant driver signal configured to reduce the vibration of the member while driving the actuator, the receiving and combining performed using a vibration canceling circuit; and inputting the resultant driver signal to the actuator to move the structure.

35. (currently amended) The method of Claim 34, further comprising ~~inputting the vibration signal to a circuit that receives the command signal and drives the actuator;~~

filtering the vibration signal from a position signal representative of a position of the actuator; and

sending the filtered position signal to the control system.

36. (previously presented) The method of Claim 34, performed without modifying the control system.

37. (previously presented) The method of claim 34, wherein the mobile platform includes an aircraft.

38. (previously presented) The method of Claim 37, wherein the member includes a wing and the structure includes an aileron.

39. (currently amended) A method of damping vibrations of a member of a mobile platform including a control system, a movable structure operatively connected to the

member, and an actuator operatively coupled to the structure to move the structure in response to a command signal from the control system, the method comprising:

sensing vibration of the member and generating a signal representative of the vibration, the sensing and generating performed using a vibration sensor operatively connected with the actuator;

inverting and superimposing the inverted vibration signal on the command signal to generate a resultant driver signal; and

inputting the resultant driver signal to the actuator to move the structure;

said method performed by a vibration canceling circuit operatively connected between the control system and the actuator.